



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/740,039	12/20/2000	Gunther Michael	32301W090	6197

7590 11/20/2002
Smith, Gambrell & Russell, LLP
Beveridge, DeGrandi, Weilacher & Young
Intellectual Property Group
1850 M Street, N.W. (Suite 800)
Washington, DC 20036

EXAMINER

METZMAIER, DANIEL S

ART UNIT	PAPER NUMBER
----------	--------------

1712

DATE MAILED: 11/20/2002

13

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/740,039

Applicant(s)

MICHAEL ET AL.

Examiner

Daniel S. Metzmaier

Art Unit

1712

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 and 30 August 2002.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2,4-8,10 and 11 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2,4-8,10 and 11 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

Art Unit: 1712

DETAILED ACTION

Claims 1-2, 4-8 and 10-11 are pending in the instant application. The amendment filed August 12, 2002, Paper No. 11, has been entered-in-part and was improper since it did not include a marked-up copy and a clean copy. The only portion of said amendment entered were those set forth at page 1, lines 9-16; actually lines 8-12; and at pages 5 and 6, the insertion of "TABLE 1" and "TABLE 1 Continued", respectively.

The Supplemental amendment filed August 30, 2002, Paper No. 12, corrects said deficiencies of Paper No. 11.

Specification

1. The disclosure is objected to because of the following informalities: the substructure set forth at page 2 of the instant specification for Aerosil R104 does not meet accepted valency requirements because the methylene ($-\text{CH}_3$) carbon contains two bonds and a valency of 5.

Applicants should indicate what the column "PA" refers in tables on pages 4 and 5. The abbreviation "(UT)" or the parenthetical numbers in the table on page 6, on page 8 or the table on page 9 have not been defined.

Appropriate correction is required.

Claim interpretation

2. Claims 1-2, 4 and 8 are directed to a hydrophobic, pyrogenically produced silica. Claim 10 is directed to a dispersion of hydrophobic, pyrogenically produced silica. Claims 8 and 10 are directed to compositions drafted in product-by-process format. For

Art Unit: 1712

products drafted in product-by-process format, the determination of patentability is based on the product itself. Please see MPEP 2113.

It is further noted; applicants do not define the remaining components of the dispersion as set forth in claim 10.

Claims 5-7 and 11 are directed to processes for the production of hydrophobic, pyrogenically produced silica and dispersions thereof.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) do not apply to the examination of this application as the application being examined was not (1) filed on or after November 29, 2000, or (2) voluntarily published under 35 U.S.C. 122(b). Therefore, this application is examined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

4. Claims 1-2, 5-8 and 10-11 are rejected under 35 U.S.C. 102(b) as being anticipated by Klinge et al., US 4,877,595¹. Klinge et al (column 4, example and

¹ Klinge et al., US 4,877,595, is a patent family member of EP 0 280 851 B1 instantly disclosed and employed by applicants as a compressing method.

Art Unit: 1712

column 3, lines 50-56) discloses methods of compressing pyrogenic silica and is a roller compactor and/or a belt filter press as claimed. Klinge et al (column 1) further teaches roller compactors as mechanical compressing methods. Klinge et al (column 4, lines 1-26) discloses the compressing of Aerosil R 972 to a value of 90-120 g/l. Aerosil R 972 is understood to be a pyrogenically produced silica that has been hydrophobed by treatment with dichlorodimethylsilane.

Klinge et al (column 3, lines 50-56) discloses the formation of silica dispersed in silicone rubber compositions. Said compositions would include solvent diluted compositions conventionally known in the art to reduce the viscosity thereof. Said disclosure reads on instant claims 9-11.

5. Claims 1-2, 4, 8 and 10-11 are rejected under 35 U.S.C. 102(b) as being anticipated by Burger, US 4,680,173. Burger (column 10, line 33 to column 11, line 2, and claims) silicas and aerosol dispersions of said silicas. The density of the silicas of 3.0 to 10 lbs/ft³ equates to about 48 to 160 grams/liter, which substantially overlaps applicants claimed range of tamped density.

6. Claims 1-2, 4-5, 8 and 10-11 are rejected under 35 U.S.C. 102(b) as being anticipated by Degussa AG, EP 0 808 880 A2 (hereafter Degussa), as evidenced by Hartmann et al, US 5,959,005². Hartmann et al is a patent family member of Degussa and is used as translation evidence of the Degussa disclosure. The citations refer to those set forth in Hartmann et al but the disclosure are considered to be the same or substantially the same.

Hartmann et al and Degussa (example) disclose the treatment of Aerosil 200; a pyrogenically produced silica produced by Degussa AG, was hydrophobically surface treated with hexamethyldisilazane followed by being compressed mechanically. Said hydrophobic silica is disclosed as having a tamped density of between 50 and 300 which 188 grams/liter exemplified.

Hartmann et al and Degussa (column 1, lines 47 et seq) disclose the use of the silica in low viscosity liquid systems that would require the formation of a dispersion as claimed. The utilities disclosed would include those conventionally known to have diluent organic solvent including at least silicone rubber, adhesive and paint compositions.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to

² Degussa has a publication date of 26 November 1997 and qualifies as prior art under 35 USC 102(b)

Art Unit: 1712

consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

9. Claims 6 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Degussa AG, EP 0 808 880 A2 (hereafter Degussa), as evidenced by Hartmann et al, US 5,959,005, optionally further in view of Klinge et al., US 4,877,595³.

Hartmann et al and Degussa (example and claims) disclose pyrogenically produced silica hydrophobically surface treated with hexamethyldisilazane followed by being compressed mechanically.

Hartmann et al and Degussa differ from the claims in the particular type of compaction method employed in compacting the silica. Hartmann et al and Degussa (example) disclose compressing the silica on a continuously operating vertical ball mill rather than the claimed roller compactor or belt filter press.

The roller compactor or belt filter press are conventionally known methods of compressing and/or compacting particulate materials and have not been shown nor disclosed to be unobvious over the use of the exemplified continuously operating vertical ball mill. It would have been obvious to one having ordinary skill in the art at the time of applicants' invention to employ conventional compress steps in making the compressed silicas in accordance with the methods disclosed in the Hartmann et al and Degussa references for their use as functional equivalent method steps of compressing the Hartmann et al and Degussa silica materials.

whereas Hartmann et al qualifies as prior art under 35 USC 102(e).

³ Klinge et al., US 4,877,595, is a patent family member of EP 0 280 851 B1 instantly disclosed and employed by applicants as a compressing method.

Klinge et al discloses methods of compressing pyrogenic silica and is a roller compactor and/or a belt filter press as claimed. Klinge et al (column 1) further teaches roller compactors as mechanical compressing methods. Klinge et al (column 4, lines 1-26) discloses the compressing of Aerosil R 972 to a value of 90-120 g/l. Aerosil R 972 is a hydrophobicized pyrogenic silica.

These references are combinable because they teach mechanical compressing methods of treating pyrogenic silica and processes and compositions produced therein. It would have been obvious to one having ordinary skill in the art at the time of applicants' invention to employ either a roller compactor or belt filter press method of mechanically compressing the pyrogenic silica taught in the Hartmann et al and Degussa references.

Response to Arguments

10. Applicant's arguments filed August 12, 2002 have been fully considered but they are not persuasive.

11. Applicants argue (pages 3 and 4) the Klinge reference does not disclose each and every element of the claim. Applicants are directed to MPEP 2113 wherein a product is examined based on the product that results and not the method that said product is made. There is no indication that the R 972 product formed with dimethyldichlorosilane would not be substantially complete. Chlorosilanes are readily hydrolyzed in aqueous environment and is further self catalyzed by said hydrolysis and HCl formation. Essentially 100 % hydrolysis would have been expected and providing the same or substantially the same product as claimed.

Art Unit: 1712

Furthermore, once a material appearing to be substantially the same, the burden shifts to applicant to show a difference and/or an unobvious difference. No such showing is set forth in the record.

12. Applicants (pages 4 and 5) assert the Burger reference is directed to hydrophobed precipitated silica. This has not been deemed persuasive since the Burger reference discloses (column 2, lines 44-50 and column 10, lines 55-62) discloses pyrogenic silicas and do not distinguish between the use of pyrogenic silicas and precipitated silicas.

13. Applicants (page 5) assert the Hartmann and EP '880 references do not show silica that has not been destructured, therefore it does not anticipate the claims. The claims do not exclude silica that has further been destructured. Regarding the compositions, applicants are directed to the comments above regarding product-by-process claims.

14. Applicants (pages 5 and 6) assert the Hartmann and EP '880 references in view of Klinge do not render claims 6 and 7 obvious because Klinge relates to a chlorosilane. This has not been deemed persuasive since the Klinge reference in said obviousness rejection is relied on for its teaching of compaction methods that are conventional in the art and would have been obvious to one having ordinary skill in the art at the time of applicants' invention.

15. Applicants assertions regarding the different methods of compaction produce different products has not been deemed persuasive since said asserted distinction has not been shown to be unobvious and/or a patentable distinction. Applicants present no

Art Unit: 1712

foundation for their conclusion that the use of different compaction methods would produce unexpected results and in point of fact use said methods interchangeably. See claim 5 to produce the same products. Klinge likewise teaches the methods may be used in obtaining the same products.

Conclusion

16. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

17. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daniel S. Metzmaier whose telephone number is (703) 308-0451. The examiner can normally be reached on 9:00 AM to 5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Dawson can be reached on (703) 308-2340. The fax phone

Art Unit: 1712

numbers for the organization where this application or proceeding is assigned are (703) 872-9310 for regular communications and (703) 872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.


Daniel S. Metzmaier
Primary Examiner
Art Unit 1712

DSM
November 18, 2002